**Note Outline – Navigating the Sky**

I. Reference Marks on Our Sky

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: point on the celestial sphere directly over your head.

b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: great arc passing through your \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the north and south points on your horizon, dividing the sky into East and West.

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: great circle on the celestial sphere 90 ̊ from your zenith, 360 ̊ around you – where Earth meets the sky.

II. Celestial Sphere

A. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the sky as a huge hollow globe or sphere in which stars and other bright objects are fixed. This sphere \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ about Earth with an apparent \_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_ motion.

i. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Places in the sky that the Earth’s axis points to.

a. \_\_\_\_\_\_\_\_\_\_\_\_\_ Celestial Pole: Near Polaris (“northstar”)

b. \_\_\_\_\_\_\_\_\_\_\_\_\_ Celestial Pole: No “southstar”

\* NCP and SCP shift positions slightly over a 26K year cycle due to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

ii. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Projection of Earth’s equator outward onto the celestial sphere.

iii. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Gridlines on the celestial sphere like latitude/longitude lines on a globe.

iv. North \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Stars: Region around NCP where stars never set, as seen from the Northern Hemisphere.

v. South \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Stars: Region around SCP where stars never rise, as seen from the Northern Hemisphere.

vi. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Stars: Region in between N/S Circumpolar regions where stars do rise and set. Between -50 ̊ and 50 ̊ declination.

vii. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Path of the Sun on the celestial sphere, created by the projection of Earth’s orbit onto the celestial sphere.

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: The 12 constellations through which the ecliptic runs.